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Morbidity and Mortality Weekly Report

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

Prepared by the COMMUNICABLE DISEASE CENTER *634-5131*

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PROVISIONAL INFORMATION ON SELECTED NOTIFIABLE DISEASES IN THE UNITED STATES AND ON DEATHS IN SELECTED CITIES FOR WEEK ENDED OCTOBER 12, 1963

BOTULISM – Three additional cases of botulism, including two deaths, related to the ingestion of smoked fish products (see MMWR Vol. 12, p. 229) have been reported during the week ending October 12. This brings the total to 16 cases and eight deaths for this outbreak. The cases reported this week included a fatality in a 7-year-old boy from Huntsville, Alabama, and two cases from Nashville, Tennessee, one of which was fatal.

A summary of information pertaining to the 16 cases is shown in the table. The average incubation period, based on the onset of gastrointestinal symptoms, was 20 hours, varying from 6½ to 21 hours. The average interval between ingestion and onset of neurological symptoms was 39 hours, with a range from five to 108 hours.

Fourteen of the victims had eaten the commercially prepared plastic wrapped product known as "vacuum packed smoked whitefish chubs" processed by the H. J. Dornbos and Brother Company of Grand Haven, Michigan and distributed by Kroger's markets.

Notably, only three of the 16 victims are known to have noted a bad or different taste to the fish. None reported the fish to have a bad odor.

The whitefish chubs were caught by gill nets in Lake Michigan on September 16. After devisceration, dressing and icing aboard the fishing boat, they were reported by Dornbos to have been processed in the following manner: they were first chilled for 1 day at 35° F, then smoked at 180° F room temperature (175° minimum room temperature)

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Table 1. CASES OF SPECIFIED NOTIFIABLE DISEASES, UNITED STATES

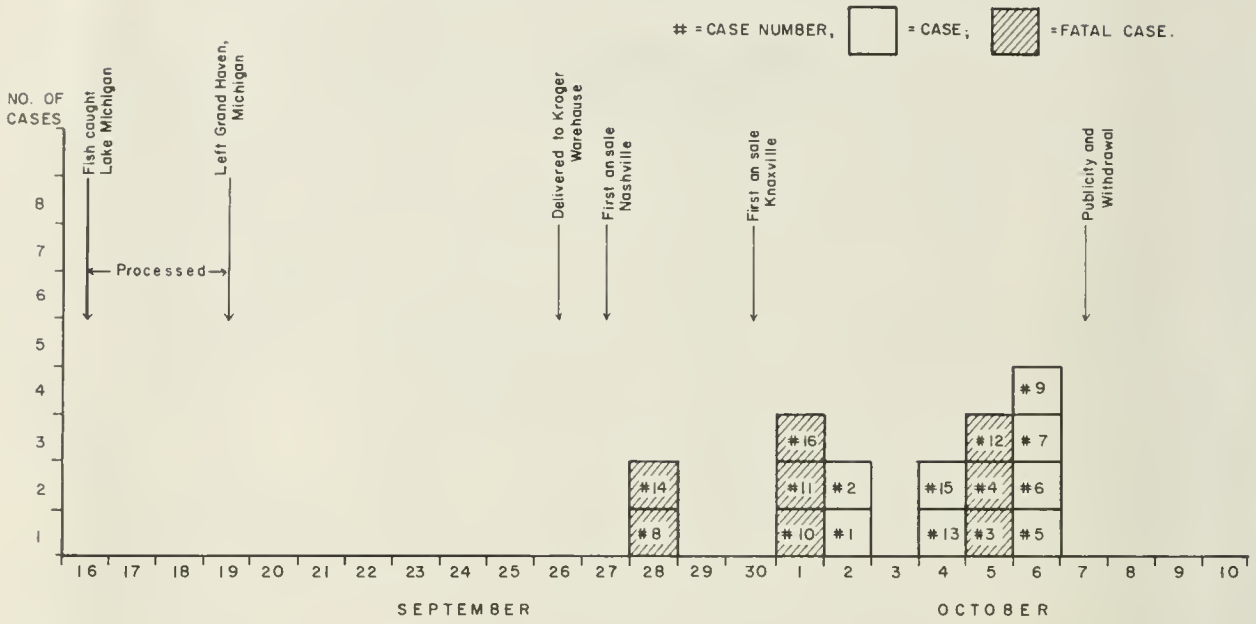
(Cumulative totals include revised and delayed reports through previous week)

Disease	41st Week			Cumulative First 41 weeks		
	Ended October 12, 1963	Ended October 13, 1962	Median 1958 - 1962	1963	1962	Median 1958 - 1962
Aseptic meningitis	58	87	---	1,443	2,032	---
Brucellosis	8	4	11	294	324	594
Diphtheria	9	17	16	203	340	507
Encephalitis, infectious	22	40	45	1,251	1,506	1,506
Hepatitis, infectious and serum	798	797	797	34,309	43,671	29,648
Measles	857	913	927	361,738	446,607	399,169
Meningococcal infections	29	43	42	1,902	1,702	1,808
Poliomyelitis, total	23	30	121	329	675	2,547
Paralytic	18	26	78	276	533	1,749
Nonparalytic	4	2	26	35	103	549
Unspecified	1	2	17	18	39	249
Streptococcal sore throat and Scarlet fever	4,608	3,889	---	268,509	249,584	---
Tetanus	15	8	---	217	221	---
Tularemia	3	6	---	225	236	---
Typhoid fever	20	12	22	432	501	648
Typhus fever, tick-borne, (Rocky Mountain spotted)	2	4	---	167	202	---
Rabies in Animals	69	57	60	3,010	3,037	3,037

Table 2. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	4	Psittacosis: N.C.-1, Fla.-1, Calif.-1	65
Botulism: Tenn. - 3	32	Rabies in Man:	1
Malaria: N.Y.-1, N.J.-1, Pa.-1, Hawaii-3, Fla.-1	78	Smallpox:	-
Plague:	-	Typhus, murine: Ala. - 2, Kans. - 1	24

EPIDEMIC CURVE OF BOTULISM RELATED TO SMOKED FISH



for five hours, then placed in the chill room at 35° F for 1 day. Finally, they were vacuum packaged in clear plastic wrapping, ready for shipment.

The Kroger shipment left Grand Haven, Michigan on September 19 by truck. It was delivered to Kroger's warehouse in Nashville on September 26. Although the shipment left Grand Haven packed in dry ice, it is as yet uncertain whether it was adequately refrigerated throughout the trip. It was distributed to 18 Kroger supermarkets on September 26 and placed on sale in Nashville, September 27, and in Knoxville, September 30 (see figure). No new case of botulism in this outbreak has occurred since Monday, October 7 when news of this incident was first publicized and the Kroger chain removed the product from its shelves.

Laboratory studies carried out at the R. A. Taft Sanitary Engineering Center and at the Food and Drug Administration have thus far revealed *Clostridium botulinum* Type E and Type E toxin in fish bones recovered from the home of Family C and from a fish remaining in the Family B home. Oil from the package from which Case 9 consumed a fish has been shown to contain Type E toxin. Testing of packages of fish, not yet sold and unrelated to cases, has revealed Type E toxin in approximately one-third of the packages.

Two Michigan cases (see MMWR Vol. 12, page 329) had eaten smoked whitefish. However, there has been no link established between the two Michigan cases and the cases in Tennessee and Alabama. Type E botulinus toxin was demonstrated in remnants of the fish as well as in liver and cardiac blood samples from the victims. The smoked fish eaten by the Michigan couple was a large whitefish (apparently not the same fish packaged by Dornbos); it is said to have been purchased from a roadside stand when the couple took a long weekend trip through northern Michigan. The source of this whitefish has not been determined.

CDC has received reports of 32 botulism cases thus far in 1963, which represents the greatest number of cases for any one year during the past decade.

BOTULISM – 1954-1963

YEAR	CASES*	YEAR	CASES*
1954	18	1959	20
1955	16	1960	12
1956	20	1961	14
1957	26	1962	10
1958	6	1963	32

*Source: State Reports received by Communicable Disease Center.

Of the other 1963 cases, only three have been attributed to Type E (see MMWR Vol. 12, page 95). This outbreak in Detroit was traced to tuna fish commercially canned in San Francisco.

(Reported by Dr. Cecil B. Tucker, Director, Division of Preventable Diseases, Tennessee Department of Public Health, Dr. George H. Agate, Epidemiologist, Michigan Department of Health, Dr. Glenn Slocum, Food and Drug Administration, Dr. W. H. Y. Smith, Director, Bureau of Preventable Diseases, Alabama State Department of Health, R. A. Taft Sanitary Engineering Center, and the Communicable Disease Center.)

Table 1

BOTULISM CASES - TENNESSEE - MICHIGAN - ALABAMA
EPIDEMIOLOGICAL DATA

CASE	AGE	SEX	DATE, TIME INGESTION	INTERVAL, IN HOURS, FROM INGESTION TO GI SYMPTOMS	NEURO SYMPTOMS	DEATH
Knoxville, Tennessee						
Family A						
Case #1	42	M	10/2 6PM	12	108	Alive
#2	41	F	10/2 6PM	12	170	Alive
Family B						
Case #3	32	M	10/5 10AM	6½	5	46
#4	10	F	10/5 10AM	8	18	48
Family C						
Case #5	39	F	10/6 1PM	7	75	Alive
#6	10	F	10/6 1PM	7	26	Alive
#7	8	F	10/6 1PM	7	26	Alive
Nashville, Tennessee						
Case #8	37	M	9/28 11AM	16	20	53
#9	53	M	10/6 5PM	13	15	Alive
#12	52	F	10/5 2-6PM**	13-17	13-17	30
#14	47	M	9/28 11AM	16	16	173
#15	54	M	10/4 7PM	17	90	Alive
Huntsville, Alabama						
Case #13	5	M	10/4 11:30AM	21	48	Alive
#16	7	M	10/1 *	*	*	Died 10/2
Kalamazoo, Michigan						
Family D						
Case #10	64	M	10/1 3PM	11	13	21
#11	62	F	10/1 3PM	11	13	24

* Specific information not available yet.
** Ate 3 fish at 2, 4 and 6 PM.

POLIOMYELITIS – Twenty-nine cases of poliomyelitis, 23 paralytic, were reported for the week ending October 12. Eight cases were reported from Pennsylvania and seven from Virginia. No other State reported more than three cases.

All of Virginia's cases were reported from the Petersburg region. A mass community immunization program, utilizing type I oral polio vaccine from the Communicable Disease Center epidemic reserve, was conducted October 12 in Petersburg.

Six of Pennsylvania's cases occurred in the metropolitan Philadelphia area.

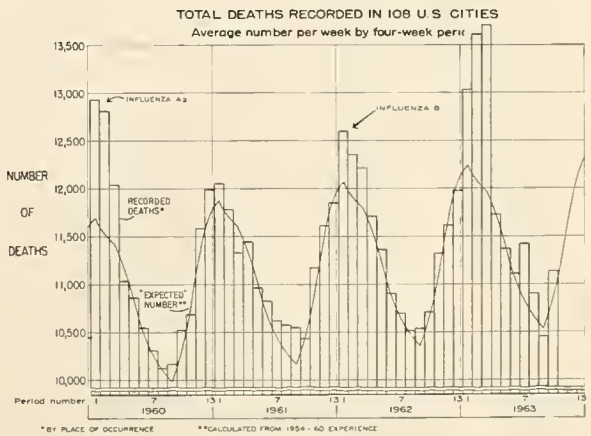
The nation's total thus far in 1963 remains below one-half that reported for a comparable period last year.

TOTAL DEATHS REPORTED IN 108 CITIES

The weekly average number of total deaths in 108 cities for the four-week period ending October 12 was 11,134 as compared with an expected weekly average of 10,833.

TOTAL DEATHS RECORDED IN 108 UNITED STATES CITIES

	WEEK ENDING				4 Week Total	Weekly Average
	9/21	9/28	10/5	10/12		
Observed	10,951	10,982	11,313	11,290	44,536	11,134
Expected	10,688	10,777	10,878	10,990	43,333	10,833
Excess	263	205	435	300	1,203	301



(See table, page 343)

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED

OCTOBER 12, 1963 AND OCTOBER 13, 1962

Area	Poliomyelitis, total cases				Poliomyelitis, paralytic				Poliomyelitis, nonparalytic		Aseptic Meningitis	
	41st week		Cumulative First 41 weeks		41st week		Cumulative First 41 weeks		41st week		41st week	
	1963	1962	1963	1962	1963	1962	1963	1962	1963	1962	1963	1962
UNITED STATES	23	30	329	675	18	26	276	533	4	2	58	87
NEW ENGLAND	-	-	4	7	-	-	4	7	-	-	2	1
Maine	-	-	1	-	-	-	1	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	1	-	-	-	1	-	-	-	-	-
Massachusetts	-	-	2	6	-	-	2	6	-	-	2	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	1
Connecticut	-	-	-	1	-	-	-	1	-	-	-	-
MIDDLE ATLANTIC	8	5	104	72	7	4	81	51	1	-	4	1
New York	-	3	8	55	-	3	5	37	-	-	4	1
New Jersey	-	-	1	6	-	-	1	6	-	-	-	-
Pennsylvania	8	2	95	11	7	1	75	8	1	-	-	-
EAST NORTH CENTRAL	1	7	49	87	1	7	37	63	-	-	8	9
Ohio	-	-	8	17	-	-	4	15	-	-	1	3
Indiana	-	2	4	16	-	2	1	12	-	-	-	-
Illinois	1	1	16	36	1	1	15	24	-	-	3	-
Michigan	-	3	15	12	-	3	15	9	-	-	4	6
Wisconsin	-	1	6	6	-	1	2	3	-	-	-	-
WEST NORTH CENTRAL	-	1	5	32	-	1	5	22	-	-	3	6
Minnesota	-	-	4	6	-	-	4	6	-	-	3	4
Iowa	-	-	-	5	-	-	-	2	-	-	-	-
Missouri	-	-	-	9	-	-	-	4	-	-	-	-
North Dakota	-	1	-	4	-	1	-	2	-	-	-	-
South Dakota	-	-	-	1	-	-	-	1	-	-	-	-
Nebraska	-	-	1	7	-	-	1	7	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	2
SOUTH ATLANTIC	13	4	56	55	9	3	47	48	3	1	1	6
Delaware	-	-	1	-	-	-	1	-	-	-	-	1
Maryland	3	-	3	1	1	-	1	1	1	-	-	-
District of Columbia	-	-	-	2	-	-	-	1	-	-	-	-
Virginia	7	-	15	7	5	-	10	7	2	-	1	1
West Virginia	-	-	2	5	-	-	2	5	-	-	-	-
North Carolina	-	2	3	10	-	1	3	8	-	1	-	-
South Carolina	-	-	6	6	-	-	5	6	-	-	-	-
Georgia	2	2	19	14	2	2	18	13	-	-	-	-
Florida	1	-	7	10	1	-	7	7	-	-	-	4
EAST SOUTH CENTRAL	1	3	64	63	1	3	60	52	-	-	8	4
Kentucky	-	1	1	26	-	1	1	20	-	-	6	-
Tennessee	-	-	8	9	-	-	8	4	-	-	1	-
Alabama	1	-	48	22	1	-	44	22	-	-	1	-
Mississippi	-	2	7	6	-	2	7	6	-	-	-	4
WEST SOUTH CENTRAL	-	6	24	278	-	4	23	217	-	1	2	21
Arkansas	-	1	4	12	-	1	3	12	-	-	-	1
Louisiana	-	1	14	20	-	1	14	18	-	-	-	-
Oklahoma	-	1	-	16	-	-	-	12	-	-	-	9
Texas	-	3	6	230	-	2	6	175	-	1	2	11
MOUNTAIN	-	2	4	14	-	2	3	10	-	-	8	1
Montana	-	1	-	4	-	1	-	3	-	-	-	-
Idaho	-	-	1	2	-	-	1	1	-	-	-	-
Wyoming	-	-	-	2	-	-	-	1	-	-	-	-
Colorado	-	1	-	2	-	1	-	1	-	-	6	1
New Mexico	-	-	1	-	-	-	-	-	-	-	-	-
Arizona	-	-	2	3	-	-	2	3	-	-	-	-
Utah	-	-	-	1	-	-	-	1	-	-	2	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	-	2	19	67	-	2	16	63	-	-	22	38
Washington	-	-	1	2	-	-	1	2	-	-	2	-
Oregon	-	-	2	5	-	-	1	5	-	-	-	-
California	-	2	16	60	-	2	14	56	-	-	20	38
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	5	12	-	-	4	12	-	-	-	-

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
OCTOBER 12, 1963 AND OCTOBER 13, 1962 - (Continued)

Area	Brucellosis		Diphtheria		Encephalitis, infectious		Hepatitis, infectious and serum				Measles	
							41st week					
	41st week	Cumulative 41 weeks	41st week	Cumulative 41 weeks	41st week		Under 20 yr.	20 & over	Total		41st week	
	1963	1963	1963	1963	1963	1962	1963	1963	1963	1962	1963	1962
UNITED STATES	8	294	9	203	22	40	413	330	798	797	857	913
NEW ENGLAND	-	1	-	8	-	1	75	41	120	102	29	34
Maine	-	-	-	-	-	-	34	17	51	32	5	4
New Hampshire	-	-	-	-	-	-	10	7	19	12	-	4
Vermont	-	1	-	-	-	-	4	3	7	-	1	1
Massachusetts	-	-	-	6	-	1	22	7	29	43	7	19
Rhode Island	-	-	-	2	-	-	-	1	3	5	7	1
Connecticut	-	-	-	-	-	-	5	6	11	10	9	5
MIDDLE ATLANTIC	1	7	1	22	7	5	75	64	139	119	93	51
New York	-	3	-	13	6	4	35	27	62	55	65	22
New Jersey	-	1	1	4	-	-	15	21	36	18	1	12
Pennsylvania	1	3	-	5	1	1	25	16	41	46	27	17
EAST NORTH CENTRAL	1	31	-	23	3	2	60	46	109	153	176	199
Ohio	-	-	-	1	1	1	16	11	30	54	25	31
Indiana	1	6	-	5	-	-	9	8	17	8	22	14
Illinois	-	18	-	12	-	1	6	8	14	28	33	20
Michigan	-	5	-	3	2	-	27	19	46	46	56	134
Wisconsin	-	2	-	2	-	-	2	-	2	17	40	-
WEST NORTH CENTRAL	5	164	1	39	2	2	17	16	43	29	38	20
Minnesota	-	8	-	15	-	-	2	5	10	6	4	2
Iowa	5	122	-	1	-	1	-	1	1	9	6	-
Missouri	-	12	-	1	1	1	6	2	8	3	3	1
North Dakota	-	-	-	2	1	-	1	5	6	1	23	14
South Dakota	-	10	1	12	-	-	4	-	4	-	2	3
Nebraska	-	6	-	8	-	-	2	3	6	4	-	-
Kansas	-	6	-	-	-	-	2	-	8	6	NN	NN
SOUTH ATLANTIC	-	18	4	48	2	13	42	31	80	86	101	97
Delaware	-	-	-	-	-	-	3	1	4	-	-	1
Maryland	-	-	-	-	-	-	6	4	10	10	5	9
District of Columbia	-	-	-	1	-	-	2	1	3	2	-	1
Virginia	-	8	-	-	-	1	8	7	20	15	16	7
West Virginia	-	-	-	1	1	6	5	1	7	22	61	57
North Carolina	-	4	-	2	-	1	10	6	16	21	-	1
South Carolina	-	-	-	17	-	-	1	1	2	2	5	4
Georgia	-	3	3	17	-	-	1	2	3	4	-	-
Florida	-	3	1	10	1	5	6	8	15	10	14	17
EAST SOUTH CENTRAL	-	13	-	16	1	4	45	21	67	74	52	51
Kentucky	-	3	-	-	-	4	12	6	18	21	27	29
Tennessee	-	6	-	3	1	-	22	10	33	26	24	21
Alabama	-	4	-	10	-	-	7	3	10	12	1	-
Mississippi	-	-	-	3	-	-	4	2	6	15	-	1
WEST SOUTH CENTRAL	-	33	3	38	-	4	31	28	59	61	80	56
Arkansas	-	7	-	2	-	-	5	5	10	9	-	-
Louisiana	-	8	3	21	-	-	3	4	7	15	-	1
Oklahoma	-	5	-	6	-	-	2	4	6	-	1	-
Texas	-	13	-	9	-	4	21	15	36	37	79	55
MOUNTAIN	-	9	-	5	-	2	14	7	49	36	99	171
Montana	-	-	-	-	-	-	3	1	5	2	58	52
Idaho	-	-	-	-	-	-	-	-	8	1	6	21
Wyoming	-	1	-	-	-	-	2	-	2	-	-	1
Colorado	-	-	-	3	-	-	3	-	10	9	7	28
New Mexico	-	-	-	2	-	2	-	5	5	3	NN	NN
Arizona	-	3	-	-	-	-	-	-	12	9	9	36
Utah	-	5	-	-	-	-	6	1	7	12	19	31
Nevada	-	-	-	-	-	-	-	-	-	-	-	2
PACIFIC	1	18	-	4	7	7	54	76	132	137	189	234
Washington	-	-	-	-	-	-	7	11	18	36	32	58
Oregon	-	3	-	-	1	-	6	10	18	16	21	14
California	1	14	-	4	6	7	38	51	89	79	108	74
Alaska	-	-	-	-	-	-	2	1	3	3	28	64
Hawaii	-	1	-	-	-	-	1	3	4	3	-	24
Puerto Rico	1	1	-	12	-	-	14	5	19	21	97	46

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

OCTOBER 12, 1963 AND OCTOBER 13, 1962 - (Continued)

Area	Meningococcal Infections		Streptococcal Sore Throat & Scarlet Fever		Tetanus	Tickborne Typhus (Rcky Mt. Spotted)	Tularemia	Typhoid Fever		Rabies in Animals		
	41st wk.	Cumulative 41 weeks	41st week		41st wk.	41st wk.	41st wk.	41st wk.	Cumulative 41 weeks	41st week		Cumulative 41 weeks
	1963	1963	1963	1962	1963	1963	1963	1963	1963	1963	1962	1963
UNITED STATES....	29	1,902	4,608	3,889	15	2	3	20	432	69	57	3,010
NEW ENGLAND.....	1	117	248	318	-	-	-	-	11	1	-	28
Maine.....	-	17	13	116	-	-	-	-	2	-	-	2
New Hampshire.....	-	4	-	12	-	-	-	-	-	-	-	12
Vermont.....	-	4	1	5	-	-	-	-	1	1	-	13
Massachusetts.....	-	54	44	48	-	-	-	-	6	-	-	. 1
Rhode Island.....	-	11	14	17	-	-	-	-	-	-	-	-
Connecticut.....	1	27	176	120	-	-	-	-	2	-	-	-
MIDDLE ATLANTIC.....	1	255	153	110	2	-	-	1	78	4	5	96
New York.....	1	121	93	58	-	-	-	1	38	3	1	71
New Jersey.....	-	36	30	35	-	-	-	-	5	-	-	-
Pennsylvania.....	-	98	30	17	2	-	-	-	35	1	4	25
EAST NORTH CENTRAL..	8	298	341	326	-	-	-	3	50	7	5	466
Ohio.....	2	79	42	43	-	-	-	2	18	6	2	275
Indiana.....	-	45	69	72	-	-	-	-	7	-	-	42
Illinois.....	3	58	49	49	-	-	-	1	10	1	1	66
Michigan.....	2	87	136	117	-	-	-	-	10	-	1	43
Wisconsin.....	1	29	45	45	-	-	-	-	5	-	1	40
WEST NORTH CENTRAL..	2	119	163	94	-	1	2	1	25	21	18	773
Minnesota.....	-	23	16	12	-	-	-	-	3	5	6	194
Iowa.....	-	7	35	40	-	-	-	-	3	4	4	289
Missouri.....	-	34	12	2	-	-	2	1	15	6	4	128
North Dakota.....	-	13	25	16	-	-	-	-	-	2	1	31
South Dakota.....	1	6	12	4	-	-	-	-	1	4	2	86
Nebraska.....	1	25	-	-	-	-	-	-	1	-	1	27
Kansas.....	-	11	63	20	-	1	-	-	2	-	-	18
SOUTH ATLANTIC.....	5	349	567	349	4	1	-	5	59	12	6	431
Delaware.....	-	4	4	2	-	-	-	1	4		-	1
Maryland.....	-	50	12	1	1	-	-	1	10	1	-	1
Dist. of Columbia..	-	6	1	-	-	-	-	-	-	-	-	-
Virginia.....	2	78	143	110	-	-	-	-	8	8	1	162
West Virginia.....	1	19	247	90	-	-	-	-	7	1	4	109
North Carolina.....	1	63	15	15	3	-	-	-	7	-	-	14
South Carolina.....	-	18	35	18	-	-	-	1	4	-	-	8
Georgia.....	-	28	3	4	-	-	-	-	2	2	-	67
Florida.....	1	83	107	109	-	1	-	2	17	-	1	69
EAST SOUTH CENTRAL..	1	137	954	640	1	-	-	1	60	2	5	237
Kentucky.....	-	30	117	32	-	-	-	-	13	-	1	111
Tennessee.....	1	62	785	582	-	-	-	1	22	1	3	108
Alabama.....	-	23	19	13	-	-	-	-	10	1	1	18
Mississippi.....	-	22	33	13	1	-	-	-	15	-	-	-
WEST SOUTH CENTRAL..	2	172	516	582	5	-	1	5	80	6	9	563
Arkansas.....	-	11	6	1	1	-	1	2	31	1	-	67
Louisiana.....	-	70	2	3	1	-	-	3	25	1	-	43
Oklahoma.....	-	31	10	-	1	-	-	-	5	1	-	50
Texas.....	2	60	498	578	2	-	-	-	19	3	9	403
MOUNTAIN.....	3	63	809	818	2	-	-	-	16	3	1	123
Montana.....	-	3	57	47	-	-	-	-	-	-	-	-
Idaho.....	-	6	84	139	-	-	-	-	-	-	-	-
Wyoming.....	-	4	30	9	-	-	-	-	-	-	-	-
Colorado.....	3	19	266	244	1	-	-	-	6	-	-	16
New Mexico.....	-	4	159	198	-	-	-	-	3	-	1	37
Arizona.....	-	10	85	111	1	-	-	-	7	3	-	56
Utah.....	-	14	128	69	-	-	-	-	-	-	-	3
Nevada.....	-	3	-	1	-	-	-	-	-	-	-	11
PACIFIC.....	6	392	857	652	1	-	-	4	53	13	8	293
Washington.....	1	31	247	144	-	-	-	1	3	-	-	-
Oregon.....	-	28	11	18	-	-	-	-	2	2	-	10
California.....	4	312	369	470	1	-	-	3	45	11	8	274
Alaska.....	-	12	58	9	-	-	-	-	1	-	-	9
Hawaii.....	1	9	172	11	-	-	-	-	2	-	-	-
Puerto Rico.....	-	7	6	-	2	-	-	-	12	-	-	13

Table 4 (A). TOTAL DEATHS IN REPORTING CITIES

(Tables 4(A), 4(B), 4(C), and 4(D) will be published in sequence covering a four-week period.)°

Area	For weeks ending			
	9/21	9/28	10/5	10/12
NEW ENGLAND:				
Boston, Mass.	254	266	223	260
Bridgeport, Conn.	36	50	29	30
Cambridge, Mass.	19	25	31	31
Fall River, Mass.	24	31	26	23
Hartford, Conn.	56	53	43	52
Lowell, Mass.	25	25	29	31
Lynn, Mass.	19	27	21	20
New Bedford, Mass.	35	29	26	18
New Haven, Conn.	48	64	45	56
Providence, R.I.	53	59	65	44
Somerville, Mass.	10	14	14	17
Springfield, Mass.	48	38	34	32
Waterbury, Conn.	31	30	32	30
Worcester, Mass.	51	47	51	68
MIDDLE ATLANTIC:				
Albany, N.Y.	48	41	45	48
Allentown, Pa.	34	36	36	39
Buffalo, N.Y.	129	127	140	135
Camden, N.J.	43	36	57	56
Elizabeth, N.J.	39	22	40	34
Erie, Pa.	35	40	35	33
Jersey City, N.J.	66	74	64	83
Newark, N.J.	98	67	82	88
New York City, N.Y.	1,486	1,665	1,639	1,684
Paterson, N.J.	33	33	34	33
Philadelphia, Pa.	402	491	520	404
Pittsburgh, Pa.	161	179	188	200
Reading, Pa.	56	35	49	43
Rochester, N.Y.	105	106	112	96
Schenectady, N.Y.	26	25	19	30
Scranton, Pa.	36	43	45	29
Syracuse, N.Y.	60	55	63	50
Trenton, N.J.	42	37	50	47
Utica, N.Y.	30	23	23	22
Yonkers, N.Y.	27	30	24	18
EAST NORTH CENTRAL:				
Akron, Ohio	70	55	60	56
Canton, Ohio	27	34	40	23
Chicago, Ill.	757	710	750	755
Cincinnati, Ohio	150	142	152	158
Cleveland, Ohio	211	186	195	228
Columbus, Ohio	113	108	109	122
Dayton, Ohio	87	90	86	79
Detroit, Mich.	366	302	396	363
Evansville, Ind.	27	37	38	37
Flint, Mich.	42	55	36	38
Fort Wayne, Ind.	48	36	40	38
Gary, Ind.	19	29	16	28
Grand Rapids, Mich.	43	55	43	47
Indianapolis, Ind.	137	162	169	166
Madison, Wis.	24	25	34	13
Milwaukee, Wis.	133	105	116	114
Peoria, Ill.	25	28	25	32
Rockford, Ill.	22	37	27	22
South Bend, Ind.	41	40	42	39
Toledo, Ohio	106	107	91	99
Youngstown, Ohio	55	43	59	59
WEST NORTH CENTRAL:				
Des Moines, Iowa	52	48	45	55
Duluth, Minn.	30	26	23	25
Kansas City, Kans.	32	34	24	40*
Kansas City, Mo.	115	124	114	133
Lincoln, Nebr.	21	31	26	29
Minneapolis, Minn.	92	132	109	118
Omaha, Nebr.	69	65	53	90
St. Louis, Mo.	230	231	233	207
St. Paul, Minn.	58	70	69	71
Wichita, Kans.	48	36	38	57
SOUTH ATLANTIC:				
Atlanta, Ga.	125	124	111	146
Baltimore, Md.	238	235	283	255
Charlotte, N.C.	35	37	48	21
Jacksonville, Fla.	65	48	67	63
Miami, Fla.	76	80	92	72
Norfolk, Va.	46	53	54	53
Richmond, Va.	70	79	91	94
Savannah, Ga.	25	26	31	40
St. Petersburg, Fla.	60	52	85	65
Tampa, Fla.	84	54	63	57
Washington, D.C.	182	190	228	201
Wilmington, Del.	49	32	34	26
EAST SOUTH CENTRAL:				
Birmingham, Ala.	81	75	68	103
Chattanooga, Tenn.	34	40	31	43
Knoxville, Tenn.	47	28	22	37
Louisville, Ky.	150	109	116	67
Memphis, Tenn.	101	86	122	104
Mobile, Ala.	36	30	44	46
Montgomery, Ala.	36	27	39	38
Nashville, Tenn.	87	81	87	85
WEST SOUTH CENTRAL:				
Austin, Tex.	37	32	33	43
Baton Rouge, La.	38	41	28	40
Corpus Christi, Tex.	21	21	21	30
Dallas, Tex.	135	128	131	135
El Paso, Tex.	37	35	31	37
Fort Worth, Tex.	71	60	59	65
Houston, Tex.	171	191	162	154
Little Rock, Ark.	56	55	64	81
New Orleans, La.	130	164	172	176
Oklahoma City, Okla.	69	72	63	71
San Antonio, Tex.	96	99	98	98
Shreveport, La.	61	37	45	57
Tulsa, Okla.	54	28	55	59
MOUNTAIN:				
Albuquerque, N. Mex.	29	24	39	25
Colorado Springs, Colo.	20	12	9	11
Denver, Colo.	113	121	135	124
Ogden, Utah	16	13	13	17
Phoenix, Ariz.	85	94	83	90
Pueblo, Colo.	13	14	9	15
Salt Lake City, Utah	56	56	51	63
Tucson, Ariz.	42	34	43	40
PACIFIC:				
Berkeley, Calif.	12	14	23	15
Fresno, Calif.	35	53	53	49
Glendale, Calif.	35	39	42	29
Honolulu, Hawaii	41	35	39	43
Long Beach, Calif.	55	64	73	78
Los Angeles, Calif.	566	556	615	526
Oakland, Calif.	95	82	95	79
Pasadena, Calif.	44	28	30	37
Portland, Oreg.	96	128	99	93
Sacramento, Calif.	45	68	70	59
San Diego, Calif.	83	84	113	121
San Francisco, Calif.	190	192	153	163
San Jose, Calif.	34	31	30	35
Seattle, Wash.	149	120	126	130
Spokane, Wash.	45	50	41	56
Tacoma, Wash.	41	35	39	32
San Juan, P.R.	2	5	3	4

*Estimate - based on average percent of divisional total.
Totals for previous weeks include reported corrections.

°Current Week Mortality for 108 Selected Cities

4(A) Total Mortality, all ages	11,290
4(B) Pneumonia-Influenza Deaths, all ages	396
4(C) Total Deaths under 1 Year of Age	789
4(D) Total Deaths, Persons 65 years and over	6,201

NOTE: All deaths by place of occurrence.

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EPIDEMIOLOGICAL REPORTS

Meningococcal Meningitis – New Jersey

Three cases of meningococcal meningitis, including one death, have been reported from Ft. Dix, New Jersey. Two cases, involving members of the same company, occurred on October 2 and one, involving a member of another company, occurred on October 6.

Since the administration of prophylactic sulfadiazine, no additional cases have been reported from Ft. Dix. *(Reported by Dr. W. J. Dougherty, Director, Division of Preventive Disease, New Jersey State Department of Health).*

Dengue Fever – Puerto Rico

During the past week, a total of 738 cases of dengue fever were reported to the Puerto Rico Department of Health. The total reported to date is 15,193 cases. Based on reported cases, disease incidence would appear to be declining.

(Reported by Dr. Victor A. Gonzalez, Director, Bureau of Health, Puerto Rico Department of Health).

INTERNATIONAL NOTES

Dengue Fever – Jamaica

Fifty-one cases of dengue fever were reported in seven parishes for the week ending September 28. This brings the cumulative total to 599 cases in Jamaica thus far in 1963.

(Reported in the Weekly Epidemiological Report, Pan American Sanitary Bureau, October 9, 1963).

Poliomyelitis – Canada

Eighty-five cases of paralytic poliomyelitis have been reported in Canada through October 5. Of these, 79 cases have occurred in the Province of Quebec, with most of the cases occurring in the southeastern region of this province. Approximately 65 percent of the population under forty years of age in this epidemic area had previously received Salk vaccine.

Most of the isolations have been Type III poliovirus. Trivalent oral vaccine was distributed in the areas reporting cases during the week ending August 10.

The Morbidity and Mortality Weekly Report is published by the Communicable Disease Center, Atlanta, Georgia, and as of October 12, 1963, had a circulation of 10,400 copies.

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In addition to the established procedures for reporting morbidity and mortality, the Communicable Disease Center welcomes accounts of interesting outbreaks or cases. Such accounts should be addressed to:

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